FIG. 1

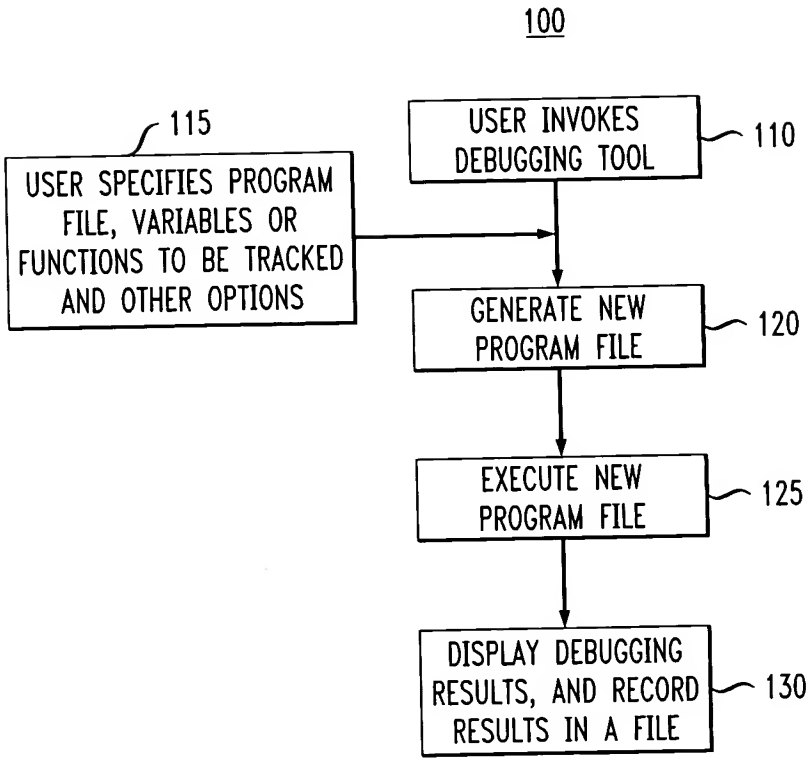

100
USER INVOKES DEBUGGING TOOL
110
115
USER SPECIFIES PROGRAM FILE, VARIABLES OR FUNCTIONS TO BE TRACKED AND OTHER OPTIONS
GENERATE NEW PROGRAM FILE
120
EXECUTE NEW PROGRAM FILE
125
DISPLAY DEBUGGING RESULTS, AND RECORD RESULTS IN A FILE
130

FIG. 2

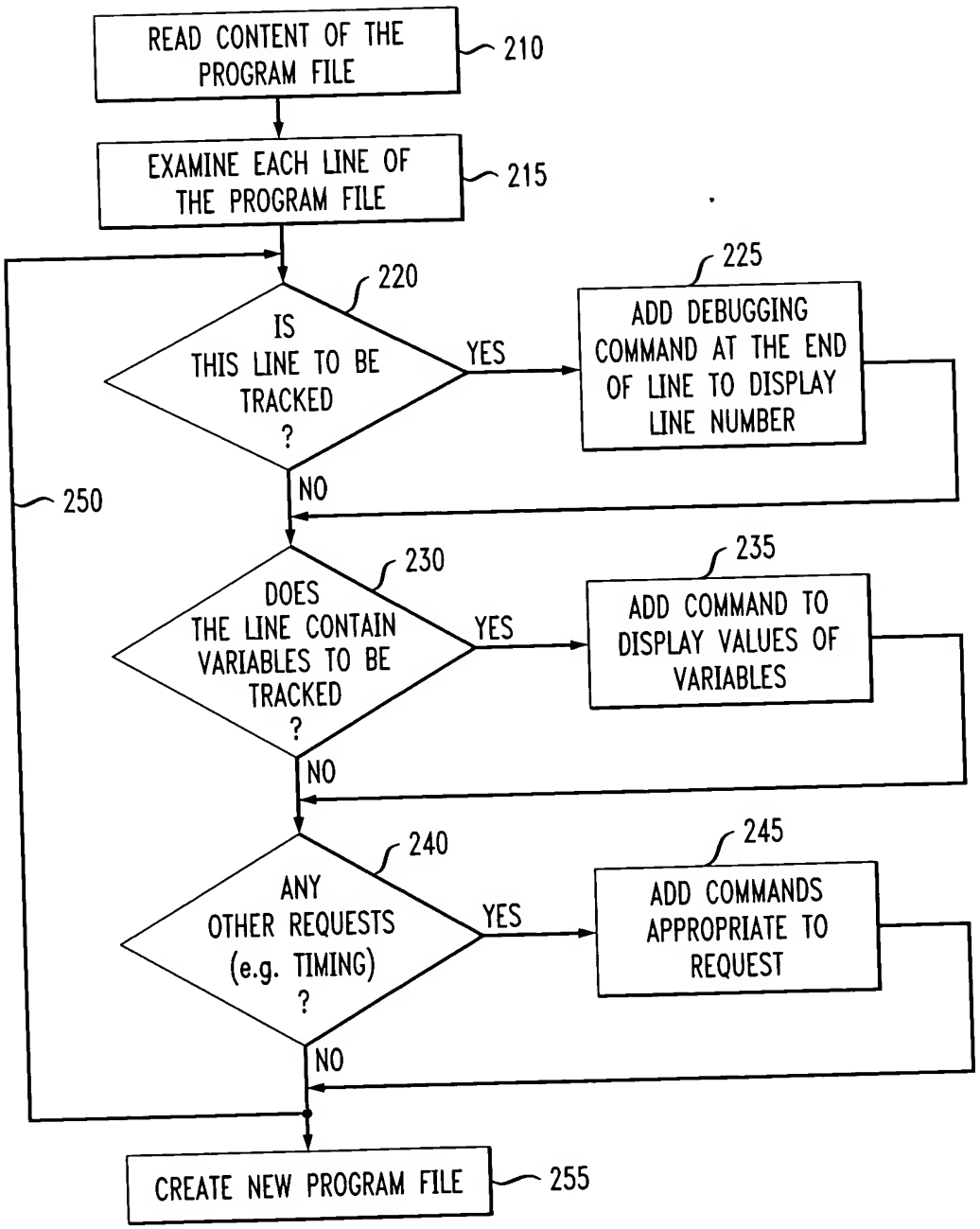

200
READ CONTENT OF THE PROGRAM FILE
210
EXAMINE EACH LINE OF THE PROGRAM FILE
215
220
IS THIS LINE TO BE TRACKED ?
YES
225
ADD DEBUGGING COMMAND AT THE END OF LINE TO DISPLAY LINE NUMBER
NO
250
230
DOES THE LINE CONTAIN VARIABLES TO BE TRACKED ?
YES
235
ADD COMMAND TO DISPLAY VALUES OF VARIABLES
NO
240
ANY OTHER REQUESTS (e.g. TIMING) ?
YES
245
ADD COMMANDS APPROPRIATE TO REQUEST
NO
CREATE NEW PROGRAM FILE
255

FIG. 3

300

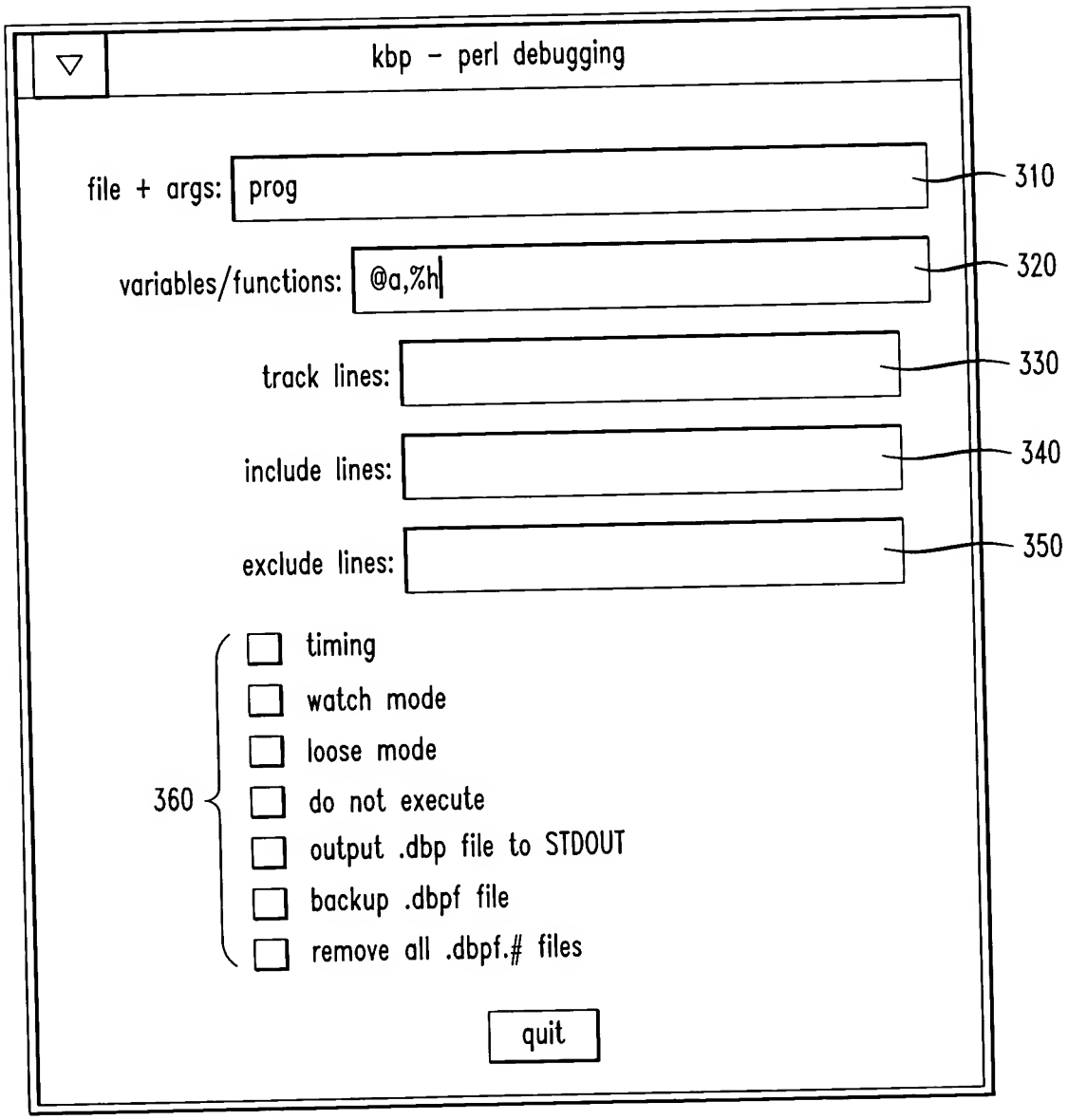
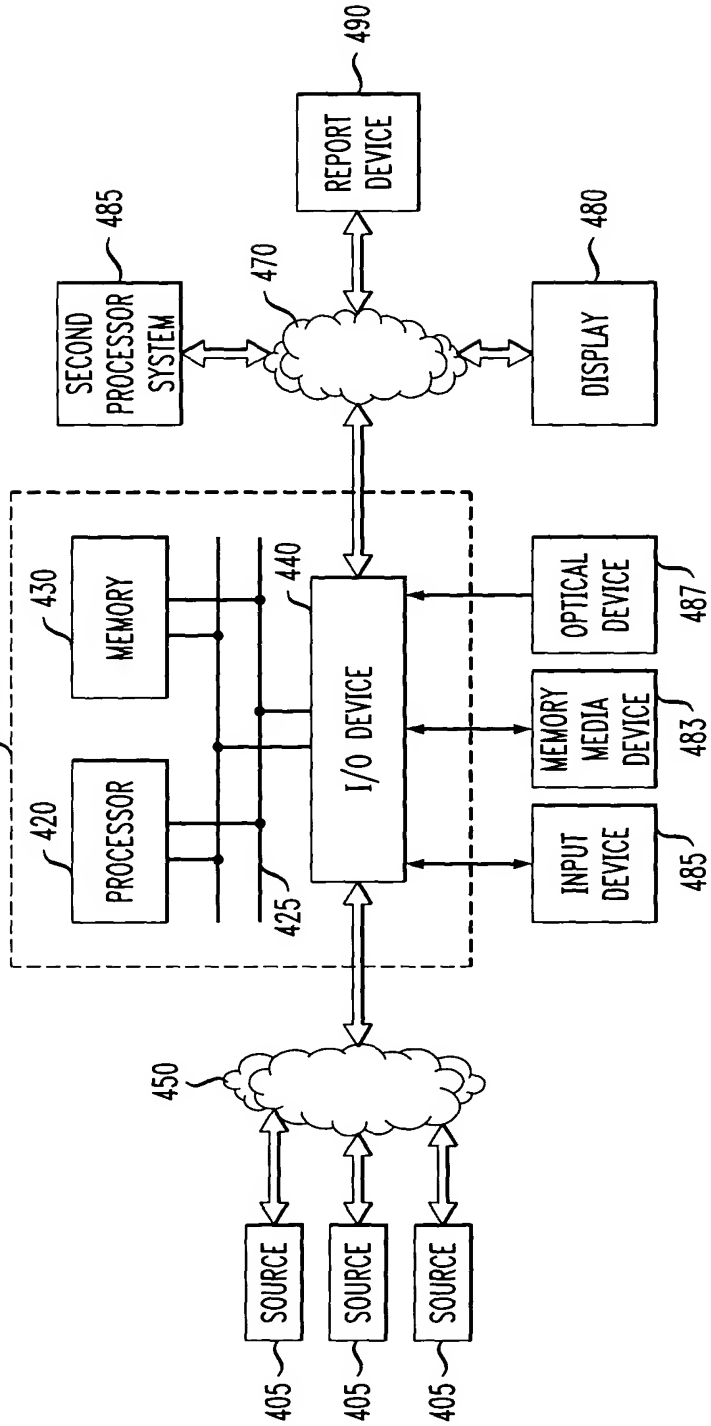

kbp - perl debugging
file + args:
prog
310
variables/functions:
@a,%h
320
track lines:
330
include lines:
340
exclude lines:
350
360
timing
watch mode
loose mode
do not execute
output .dbp file to STDOUT
backup .dbpf file
remove all .dbpf.# files
quit

FIG. 4


400
410
SOURCE
405
450
PROCESSOR
420
MEMORY
430
425
I/O DEVICE
440
SECOND PROCESSOR SYSTEM
485
470
REPORT DEVICE
490
DISPLAY
480
OPTICAL DEVICE
487
MEMORY MEDIA DEVICE
483
INPUT DEVICE
485